

**REMARKS**

This submission is in response to the Official Action dated January 11, 2005. Reconsideration of the above identified application, in view of the above amendments and the following remarks, is respectfully requested.

Claim 27 has been added. Support for this new claim is found, for example, on page 15, lines 4-7 and 9-10, of the present Specification and shown on Fig. 2. No new matter has been added. Claims 4-18 and 22-27 are presently pending. Claims 4-18 and 22-26 stand rejected.

Claims 4-15, 22-24, and 26 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,926,218 to Smith. Claims 16-18 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith in view of U.S. Patent No. 6,654,057 to Rhodes. Claim 25 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith in view of U.S. Patent No. 5,986,764 to Nonaka. Applicants respectfully traverse these rejections, and reconsideration is respectfully requested.

The present invention is directed to an image capturing apparatus that includes a first optical system and a second optical system, each of which is independent from each other. A processing means corrects a difference in image capturing position between the first optical system and the second optical system. As shown in Fig. 2, the first optical system supplies image data at one image capturing position, e.g., light F1, to the first image capturing device and the second optical system supplies image data at another image capturing position, e.g., light F2, to the second image capturing device. The image data is supplied separately from each of the optical systems to the respective capturing devices since the two optical systems each capture an image at a different image capturing position.

The Examiner contends that Smith discloses all of the features of the present invention set forth in claims 22, 23, and 24. There are two embodiments of the Smith invention, as shown in Figs. 1 and 2.

Fig. 1 of Smith illustrates a camera with one image sensor 18 that is preferably a CCD device imager providing motion-capable resolution and another image sensor 22 providing a higher resolution than the first image sensor 18. A viewfinder optical section 16 directs light to the low resolution sensor 18, and an imaging optical section 20 directs light to the high resolution sensor 22. A microprocessor 52 synchronizes the low resolution image from the low resolution sensor 18 and the high resolution image from the high resolution sensor 22 and matches low resolution motion segments with a high resolution image segment (Smith, column 3, lines 59-60, and column 4, lines 13-15).

Fig. 2 of Smith illustrates a camera with an image beamsplitter 64 inserted between an image optical section 20 and the high resolution sensor 22 (Smith, column 5, line 66, to column 6, line 1). Light in a main optical path 66 is split by the beamsplitter 64 into two paths, one path directed to the high resolution sensor 22 and the other path directed to the low resolution sensor 18 (Smith, column 6, lines 1-4). Therefore, a major difference between the embodiment of the invention shown in Fig. 1 and the embodiment shown in Fig. 2 is that in Fig. 1, separate optical paths 10, 12 provide image light to the respective sensors 18, 22. In Fig. 2, a single beam of light is split by a beamsplitter 64 and then directed to the two sensors 18, 22.

Furthermore, in Fig. 2, a microprocessor 52 performs corrections such as autofocus and autoranging as stated in the following:

Besides offering autofocus and autoranging, the utilization of a beamsplitter reduces the complexity of the optics and image alignment, and takes up less space in the camera. In addition, this arrangement eliminates parallax (pointing) errors between the sensors. (Smith, column 6, lines 29-33).

The Examiner points to this statement as showing that Smith's camera includes a processing means that "corrects a difference in image capturing position between said first optical system and said second optical system," as set forth in claims 22, 23, and 24. However, this description only applies to the second embodiment of Smith's invention shown in Fig. 2.

The Examiner contends that Smith's imaging optical section 20 and viewfinder optical section 16 serve as first and second optical systems that each supply image data to the sensors 18, 22. However, the second embodiment of Smith's invention shown in Fig. 2, which includes the microprocessor described above, does not include separate optical systems that supply image data to the separate image capturing devices. As shown in Fig. 2, Smith's viewfinder optical section 16, which the Examiner contends is one optical system, receives light transmitted from the imaging optical section 20, which the Examiner contends is another optical system. Imaging optical section 20 transfers light to both sensors 18, 22, which the Examiner contends are image capturing devices. Therefore, one optical system transfers image data to both image capturing devices. Smith provides one optical system that transfers image data to both image capturing devices and does not disclose or suggest two optical systems that transfer image data separately to the image capturing devices.

Page 15, lines 9-16, of the present Specification describes the advantages of providing an image capturing apparatus with two independent optical systems:

By using optical systems provided independently of each other in an image capturing apparatus that includes a plurality of image capturing devices, the configuration described above enables the provision of optical systems that are suitable for the respective image capturing devices, and, as a result, is capable of improving the image quality or reducing production costs by simplifying the structure. Furthermore, by processing the parallax between the optical systems by using a processing means, it is also possible to eliminate the parallax while limiting the increase in costs

Thus, the advantage of providing two separate and independent optical systems permits the use of optical systems that are suitable for the respective image capturing devices, thereby improving the image quality and reducing production costs.

Furthermore, claims 22, 23, and 24 set forth a processing means for correcting a difference in image capturing position between the first optical system and the second optical system. Smith does not disclose or suggest including a processing means that corrects the difference in image capturing position between two optical systems. Smith discloses that the

microprocessor 52 is provided for eliminating parallax errors between the two sensors, which the Examiner contends are the *image capturing devices*, and does not disclose or suggest eliminating parallax errors between two *optical systems*, as set forth in the claims.

As stated on page 29, lines 4-6, of the present Specification, since two separate optical systems are provided in the present invention, a parallax is generated between the two optical systems. The processing means of the present invention corrects this parallax between the two optical systems.

In the present invention, two optical systems are provided for supplying image data to two image capturing devices. As stated on page 29, lines 4-6, of the present Specification, the moving image optical system and the still image optical system are separate systems and therefore, a parallax is generated between the two *optical systems*. Smith does not provide two optical systems and eliminates parallax errors between two *sensors*. Furthermore, neither Rhodes nor Nonaka disclose or suggest these elements of the claimed invention.

Applicants respectfully traverse the rejection because neither Smith, Rhodes, nor Nonaka disclose or suggest all of the elements of claims 22, 23, and 24. Claims 4-18, 25, and 26 depend on claims 22, 23, and 24, and are therefore also patentable for at least the same reasons.

Thus, Applicants respectfully submit that for at least the aforementioned reasons, claims 4-18 and 22-26 of the present invention are patentable over the prior art. Based on the foregoing, the rejections of the claims under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) should be withdrawn, and reconsideration is respectfully requested.

### CONCLUSION

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

If there are any other issues remaining which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

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Respectfully submitted,

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